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A3

(54) Title: HUMAN C-TYPE LECTIN

(57) Abstract: The present invention provides a polynucleotide (mct1) which identifies and encodes a novel human C-type lectin (MCTL). The invention provides for genetically engineered expression vectors and host cells comprising the nucleic acid sequence encoding MCTL. The invention also provides for the use of substantially purified MCTL and its agonists in the commercial production of recombinant proteins and in pharmaceutical compositions for the treatment of diseases associated with the expression of MCTL. Additionally, the invention provides for the use of antisense molecules to mct1 in pharmaceutical compositions for treatment of diseases associated with the expression of MCTL. The invention also describes diagnostic assays which utilize diagnostic compositions comprising the polynucleotide, fragments or the complement thereof, which hybridize with the genomic sequence or the transcript of mct1. The present invention also relates to anti-MCTL antibodies which specifically bind to MCTL.

WO 98/002456 A3

## INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER  
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C12R1:19)

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, SEQUENCE SEARCH, CHEM ABS Data, MEDLINE, BIOSIS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| A          | N. SUZUKI ET AL.: "Molecular Cloning and Expression of cDNA Encoding Human Macrophage C-Type Lectin"<br>JOURNAL OF IMMUNOLOGY,<br>vol. 156, no. 1,<br>1 January 1996 (1996-01-01), pages<br>128-135, XP002046614<br>cited in the application<br>page 134, left-hand column, paragraph 2<br>-right-hand column, paragraph 2; figures<br>2,3<br>----<br>-/- | 1,3,10,<br>11         |

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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"&" document member of the same patent family

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|----------|--|-----------------------|
| A        | C. CHANG ET AL.: "Molecular characterization of human CD94: a type II membrane glycoprotein related to the C-type lectin superfamily"<br>EUROPEAN JOURNAL OF IMMUNOLOGY, vol. 25, September 1995 (1995-09), pages 2433-2437, XP002046615<br>cited in the application<br>page 2436, left-hand column, paragraph 2<br>-right-hand column, paragraph 2; figure 1<br>--- | 1,3,10,<br>11         |
| A        | WO 94 11497 A (INCYTE PHARMA INC<br>;SEILHAMMER JEFFREY J (US); NEDWIN GLENN<br>(US); B) 26 May 1994 (1994-05-26)<br>claims; examples<br>---   | 1                     |
| A        | DATABASE WPI<br>Section Ch, Week 9401<br>Derwent Publications Ltd., London, GB;<br>Class B04, AN 94-002489<br>XP002046616<br>& JP 05 312807 A (TEIJIN LTD),<br>26 November 1993 (1993-11-26)<br>abstract<br>-----  | 1,3,10,<br>11         |

## INTERNATIONAL SEARCH REPORT

Information on patent family members

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| Patent document cited in search report | Publication date | Patent family member(s) |            | Publication date |
|--|------------------|-------------------------|------------|------------------|
| WO 9411497                             | A 26-05-1994     | AU                      | 5608594 A  | 08-06-1994       |
|  |                  | WO                      | 9411497 A1 | 26-05-1994       |
|  |                  | US                      | 5693760 A  | 02-12-1997       |
|  |                  | US                      | 6245334 B1 | 12-06-2001       |
|  |                  | US                      | 5710257 A  | 20-01-1998       |
|  |                  | US                      | 6406679 B1 | 18-06-2002       |
|  |                  | US                      | 6153195 A  | 28-11-2000       |
| JP 5312807                             | A 26-11-1993     | JP                      | 2702354 B2 | 21-01-1998       |